

Application No..10/643,446
Response dated: March 6, 2006
Reply to Office Action of December 6, 2005

AMENDMENTS TO THE DRAWINGS

Replace originally filed Figure 7 with the one (1) Replacement Drawing Sheet appended hereto.

REMARKS

In response to the Office Action dated December 6, 2005, Applicants respectfully request reconsideration based on the above claim amendments and the following remarks. Applicants respectfully submit that the claims as presented are in condition for allowance.

Claims 1, 2, 4, 7 and 9-12 are pending in the present Application. Claim 1 is amended and Claim 7 is cancelled, leaving Claims 1, 2, 4 and 9-12 for consideration upon entry of the present amendments and following remarks.

Support for the claim amendments can at least be found in the specification, the figures, and the claims as originally filed. Particularly, support for amended Claim 1 is found in canceled Claim 7.

No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Drawing Objections

The Examiner objects to the drawings because elements 10, 20, 50 and 60 in Figure 7 are improperly cross-hatched based on the material of the elements.

In reply, Applicants hereby submit one (1) corrected drawing sheet in compliance with 37 C.F.R. 1.121(d). The amended drawing sheet includes all of the figures appearing on the immediate prior version of the sheet. The replacement sheet is labeled "Replacement Sheet" in the page header (as per 37 C.F.R. §1.84(c)).

All of the Examiner drawing concerns are addressed and remedied in the accompanying Replacement Drawing Sheets. Accordingly, reconsideration and withdrawal of the outstanding drawing objection is respectfully requested.

Claim Rejections Under 35 U.S.C. §103

Claims 1, 2, 4, 7 and 9-12 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent 5,738,352 to Ohkubo et al. (hereinafter "Ohkubo") in view of Meyer, U.S. Patent 6,709,183 (hereinafter "Meyer"). Claim 7 is hereinabove canceled without prejudice. Applicants respectfully traverse the rejection.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art and that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Amended Claim 1 recites,

Plastic joint comprising:
a selector pin capable of moving around at least one swivel axis,
an inner, first joint element being ring-shaped and an outer, second joint element for mounting in a device, wherein the first joint element includes a first plastic material with axially opposite end sections, and the second joint element includes a second plastic material with borings that lie within the swiveling axis, the borings forming the receptacle for the end sections of the first joint element,
a ring made of the second plastic material adjacent the first joint element and encompassing the selector pin, and
a seal element comprised of a film made of thermoplastic polymer and having a restoring function, wherein the seal element spans a common end surface of the joint elements and the ring is sealed there,
wherein the first joint element is fixed in a position on the selector pin and shaped such that ring collars are formed, the second joint element bearing against the ring collars, and
wherein the second joint element is a closed ring shape and includes longitudinal sides in which the borings are formed and narrow sides, the longitudinal and narrow sides being spaced apart from an outer diameter of the first joint element.

Firstly, in the Office Action, the shafts 51, 52 and key member 3 of Ohkubo are cited as disclosing as axially opposite end sections and the first joint element, respectively of amended Claim 1. The key member is disclosed as being disc-like with a slightly smaller outer diameter than that of the inner diameter of the outer ring 20 (considered as the second joint element). (Col. 7, lines 14-24.) The inner circumference of the outer ring 20 is provided with bearings *in which* shafts 51,52 are supported for *free rotation*. (*Id.*) The key member 3 is also *freely rotatable or pivotable* relative to the outer ring 20 about an axis established by the shafts 51,52. (*Id.*) As better seen in Fig. 4B, the shafts 51,52 are not part of either the key member 3 or the outer ring 20. The key member 3 and the outer ring 20 merely freely pivot about the shafts 51,52, the shafts 51,52 not being a part of either the key member 3 or the outer ring 20.

Therefore, Ohkubo fails to disclose the first joint element includes axially opposite end sections of amended Claim 1. To the contrary, the key member 3 *freely rotates* about an axis defined by the shafts 51,52 and does not include the shafts 51,52.

Secondly, it is alleged in the Office Action that Ohkubo discloses wherein the first joint element is fixed in a position on the selector pin and shaped such that ring collars are formed, the second joint element bearing against the ring collars of amended Claim 1. Applicants do not understand what feature of key member 3 (considered the first joint element) is equivalent to “ring collars” of the claimed invention. It is stated that “annular surfaces” of the key member 3 are considered the ring collars, but Applicants respectfully request the Examiner provide further explanation as to which annular, or ring, surfaces disclose the rings collars.

Additionally, as discussed above, both the key member 3 and the outer ring 20 *freely rotate* about the axis defined by shafts 51,52. As best seen in Fig. 4B of Ohkubo, the key member 3 and the outer ring 20 do not come into contact at all with each other. Since there is no contact of the key member 3 and the outer ring 20, the outer ring 20 necessarily does not “bear against the key member 3, let alone any “annular surfaces” of or anything resembling ring collars of the claimed invention. Therefore, Ohkubo fails to disclose the first joint element is shaped such that ring collars are formed, the second joint element bearing against the ring collars.

With respect to Meyer, the core 2/studs 3,4 and the half shells 7,8 are cited as disclosing the first joint element and the second joint element, respectively of amended Claim 1. Applicants find no disclosure of anything resembling a ring collar of the claimed invention on the core 2/studs 3,4. Additionally, as clearly seen in Fig. 1, the core 2/studs 3,4 do not come into contact with the half shells 7,8 in any way, but are instead held apart by the pad 11,12. Therefore, Meyer also fails to disclose the first joint element is shaped such that ring collars are formed, the second joint element bearing against the ring collars.

In the instant Office Action at the top of Page 4, it is stated that Ohkubo fails to teach a plastic joint comprising a ring made of the second plastic material adjacent the first joint element and encompassing (encircling) the selector pin (via first joint element 3,4) and a seal element comprised of a film made of thermoplastic polymer, wherein the seal element spans a common end surface of the joint elements and the ring is sealed there. It is stated however that Meyer discloses these elements of Claim 1. Applicants respectfully disagree.

Thirdly, Meyer discloses the pads 11,12 *completely surround* the studs 3,4 in the form of cups (pots). (Col. 2, lines 17-26 and Fig. 2.) The two pads 11,12 are *insulated from each other*. (Col. 2, lines 38-41 and Fig. 2.) That is, the pads 11,12 in no way encompass or encircle the cylindrical component 17 that would be inserted in the bore of the core 2. At best, the pads 11,12 are disposed on either side of the cylindrical component 17, but clearly cannot be considered as “encompassing” or “encircling” the cylindrical component 17. The pads 11,12 are not part of the core 2/studs 3,4 or the two half-shells 7,8 and are completely separate pieces. Therefore, Meyer also fails to disclose a ring made of the second plastic material adjacent the first joint element and encompassing the selector pin of amended Claim 1.

Fourthly, as discussed above, Meyer discloses the pads 11,12 in the form of cups (pots) to completely surround the studs. Cups or pots, as shown for example, in Fig. 2 of Meyer, cannot be considered a “film” of the claimed invention. Therefore, Meyer necessarily fails to disclose a seal element comprised of a film of amended Claim 1.

Fifthly since the pads 11,12 and the two half-shells 7,8 are *distinct separate pieces* (See, Col., 2, lines 45-47), there necessarily cannot be a “common end surface” of the two half-shells 7,8 themselves. Therefore, Meyer necessarily fails to disclose a seal element spans a common end surface of the joint elements of amended Claim 1.

Sixthly, notwithstanding that Meyer fails to teach the ring of the claimed invention as discussed above, for purposes of this response, Applicants note that pads 11,12 have already been considered the ring of the claimed invention earlier in the rejection. The pads 11,12 cannot be considered as the seal element *and* the ring of the claimed invention. Therefore, Meyer necessarily fails to disclose a seal element comprised of a film made of thermoplastic polymer and having a restoring function, wherein the seal element spans a common end surface of the joint elements and the ring is sealed there of amended Claim 1.

Seventhly, for purposes of this response, if pads 11,12 are considered as the seal element of the claimed invention, the pads 11,12 do not span a common end surface of the core 2/studs 3,4 and the two half-shells 7,8. The pads 11,12 are placed at an inner surface of the half-shells 7,8, which clearly cannot be considered as an *end* of the half-shells 7,8. Therefore, Meyer again fails to disclose a seal element that spans a common end surface of the joint elements of amended Claim 1.

Furthermore, in a non-limiting exemplary embodiment, a sealing element is described as “covering and sealing of the joint area at least on its outer, *upper surface*. (Paragraph [0007].) The seal element is further described as “drawn over one common end surface of the joint elements 10,20. (Paragraph [0025].) As clearly shown in at least Figs. 2 and 6, the sealing element *spans* a common end surface of the joint elements 10,20. The pads 11,12 are placed around the studs 3,4. However, the “end surface” as disclosed in the specification clearly does not indicate a surface by the studs 3,4. Therefore, Meyer further fails to disclose a seal element that spans a common end surface of the joint elements of amended Claim 1.

Finally, it is conceded that Ohkubo and Meyer both fail to disclose the second joint element includes longitudinal sides in which the borings are formed and narrow sides, the longitudinal and narrow sides being spaced apart from an outer diameter of the first joint element of the claimed invention. It is stated that it would have been obvious to modify a plastic joint as disclosed by Ohkubo in view of Meyer to teach the claimed invention as such practice is a design consideration within the skill of the art. Applicants respectfully disagree.

In a non-limiting embodiment of the invention, it is disclosed that “the end sections 31,32 need only be inserted through the borings 21,22 via a *widening of the second joint element*.” (See, Paragraph [0025.] “[T]he spacing of the two narrow sides is greater [than the outer diameter of the first joint element] so that when the outer joint element 20 is placed upon the end sections 31,32 of the first joint element 10 there will be a specific *deformation path*. (Paragraph [0026.]) Applicants provide a diagram for illustration purposes of the outer joint element being “deformed” (the longitudinal sides) so that the end sections 31,32 can be placed in the borings 21,22. (See, the top drawings indicated by the circled “1”). Therefore, the second joint element includes longitudinal sides in which the borings are formed as claimed, is not a mere design consideration, but is for a particular purpose as discussed above.

Moreover, if the invention included the shape of outer ring 20 relative to the key member 3 of Ohkubo, the invention would not perform equally as well. That is, assuming for purposes of this response that the shafts 51,52 were included in the key member 3, the shafts 51,52 would not be able to be inserted into the bearings of the outer ring 20 via a *widening* of the outer ring 20, as discussed above.

The half-shells 7,8 of Meyer fail to disclose the second joint element is a closed ring shape of amended Claim 1. However, assuming for purposes of this response that the half shells 7,8 formed a closed ring shape, the key member 3 of Ohkubo, the invention would still perform equally as well. That is, the studs 3,4 would not be able to be inserted into the bore 13 of the half-shells 7,8 via a *widening* of the half-shells 7,8, as discussed above. That is, the dimensioning of the second joint element (longitudinal sides and narrow sides) has essential functional importance regarding the manufacturability (elastic behavior of the longitudinal sides to create a “snap-in” effect of the end sections into the borings).

Therefore, the second joint element includes longitudinal sides in which the borings are formed as claimed, is not a mere design consideration, but the invention would not perform equally well with any shaped second joint element relative to the first joint element, let alone with the arguably substantially ring (circular) shaped outer ring 20 of Ohkubo and the half-shells 7,8 of Meyer.

Furthermore, in a non-limiting embodiment of the invention, it is disclosed that when the seal element in the form of a plastic film 40 is drawn over one common end surface of the joint elements 10,20 and is sealed to it, a restoring effect on the joystick can be achieved maintaining the seal tightness of the joint. (See, Paragraph [0025].) That is, the dimensioning of the second joint element (longitudinal sides and narrow sides) has essential functional importance regarding providing a space between the opposite end surfaces of the first and second joint elements enabling the sealing film to be compressed on one side and stretched on the other side when the pin swivels about the axis X-X, as illustrated in the attached diagram for illustration purposes in the bottom drawings indicated by the circled “2”. Therefore, the longitudinal and narrow sides being spaced apart from an outer diameter of the first joint element as claimed, is not a mere design consideration, but is for a particular purpose as discussed above.

As discussed above, Ohkubo and Meyer fail to *teach or suggest all of the limitations* of amended Claim 1. Thus, *prima facie* obviousness does not exist regarding amended Claim 1 with respect to Ohkubo and Meyer.

Additionally, Applicants submit that there exists no motivation to modify or combine Ohkubo and Meyer to teach the claimed invention.

Applicants find no disclosure in Ohkubo and Meyer that would motivate one skilled in the art at the time of the invention to modify Ohkubo and Meyer to include the first joint element is shaped such that ring collars are formed, the second joint element bearing against the ring collars and the second joint element includes longitudinal sides in which the borings are formed and narrow sides, the longitudinal and narrow sides being spaced apart from an outer diameter of the first joint element of at least amended Claim 1. Therefore, there is no suggestion or incentive that would have motivated the skilled artisan to modify Ohkubo and Meyer to teach the claimed invention.

Applicants further submit that the rejection of Claim 1 merely alleges but does not show that knowledge generally available to one of ordinary skill in art would lead that individual to combine the relevant teachings of the references to disclose the claimed invention. Here again, *prima facie obviousness* does not exist regarding Claim 1, as the requirements of *prime facie* obvious are not met.

Since Ohkubo and Meyer fail to teach or suggest all of the limitations of amended Claim 1, and that there lacks evidence to show that knowledge generally available to one of ordinary skill in art would lead that individual to combine the relevant teachings of the references to disclose the claimed invention, clearly, one of ordinary skill at the time of Applicants' invention would not have a motivation to modify or combine the references, nor a reasonable likelihood of success in forming the claimed invention by the Examiner's modifying or combining the references. Thus, here again, *prima facie* obviousness is unfounded. *Id.*

Thus, *prime facie obviousness* does not exist regarding amended Claim 1 with respect to Ohkubo and Meyer. Applicants respectfully submit that Claim 1 is not further rejected or objected and is therefore allowable. Claims 2, 4 and 9-12 variously depend from Claim 1 and are correspondingly allowable. Reconsideration and allowance of Claims 1, 2, 4 and 9-12 are respectfully requested.

Conclusion

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued.

Application No. 10/643,446
Response dated: March 6, 2006
Reply to Office Action of December 6, 2005

If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

Respectfully submitted,

CANTOR COLBURN LLP

By: Amy Bizon-Copp
Amy Bizon-Copp
Reg. No. 53,993
CANTOR COLBURN LLP
55 Griffin Road South
Bloomfield, CT 06002
Telephone (860) 286-2929
Facsimile (860) 286-0115

Date: March 6, 2006